ProjectX Linac with HWR1 and SSR1 at 5 mA
"02-JUNE-11 Baseline Lattice" with 9HWR1+"standard" SSR1

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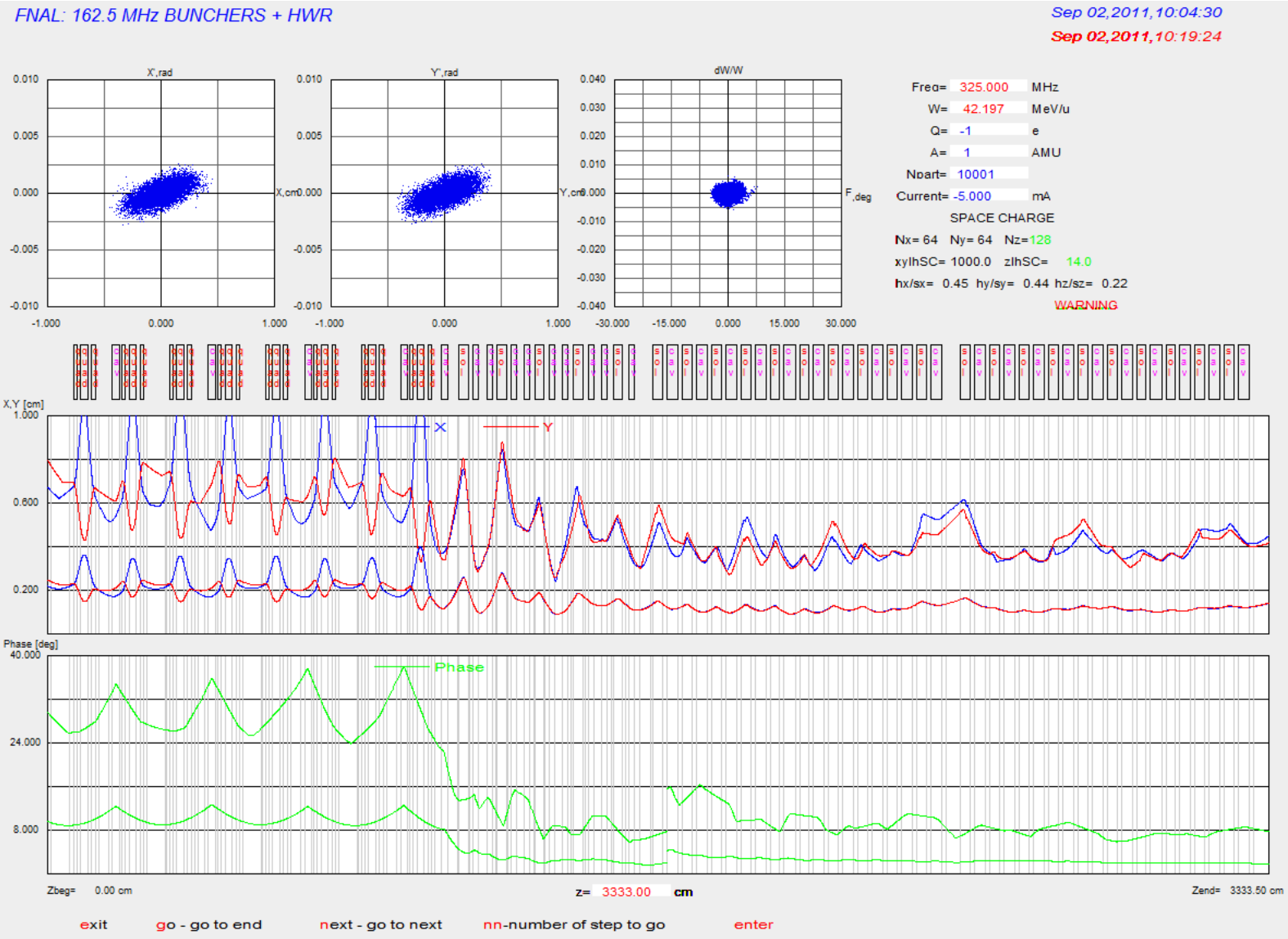
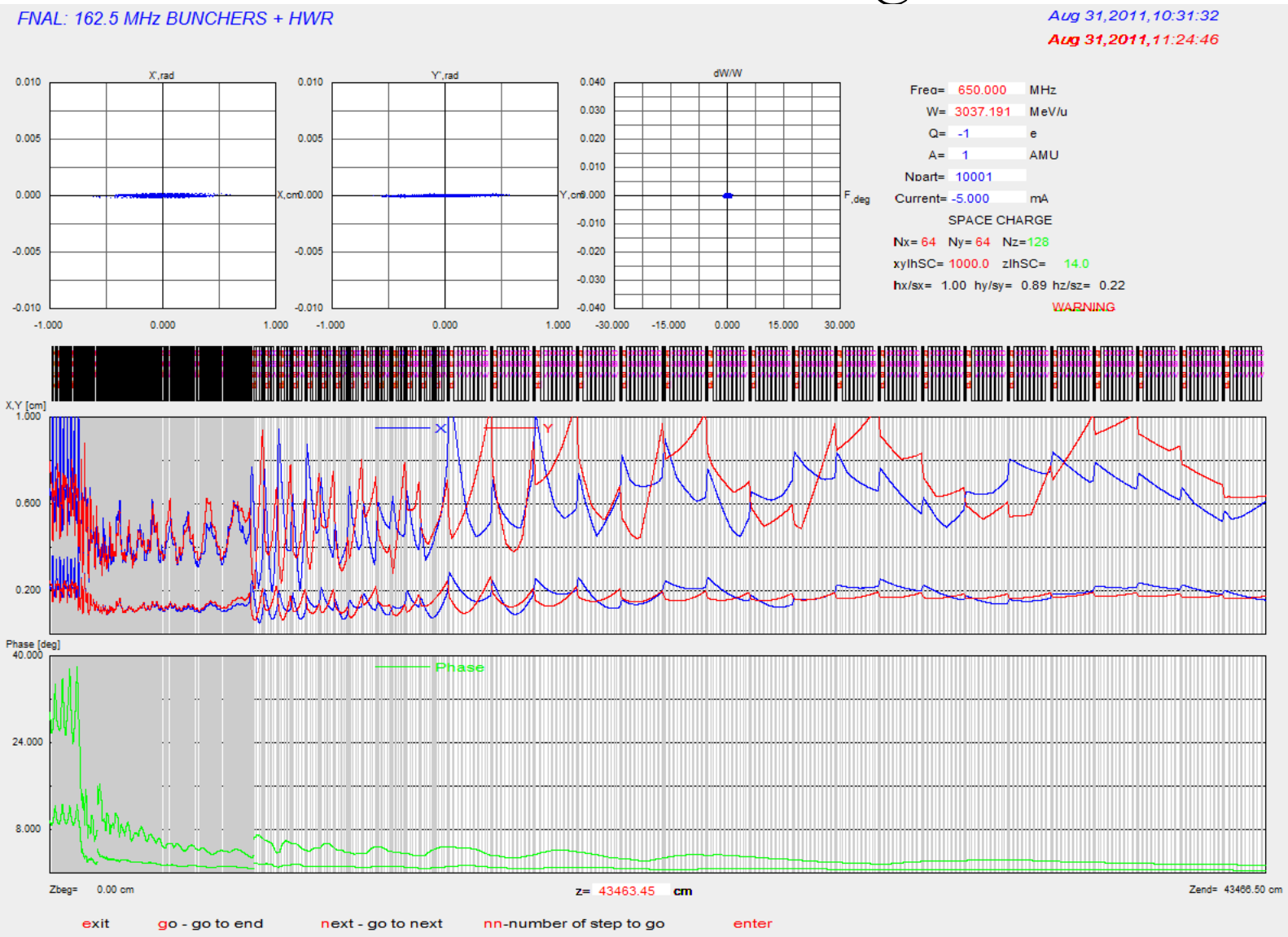
FNAL

Sept 2nd 2011

TRACK simulations: MEBT + HWR1+SSR1
Bunch : 162.5 MHz @ 5 mA



TRACK simulations: MEBT + HWR1+SSR1+… (up to 3GeV)
Bunch : 162.5 MHz @ 5 mA



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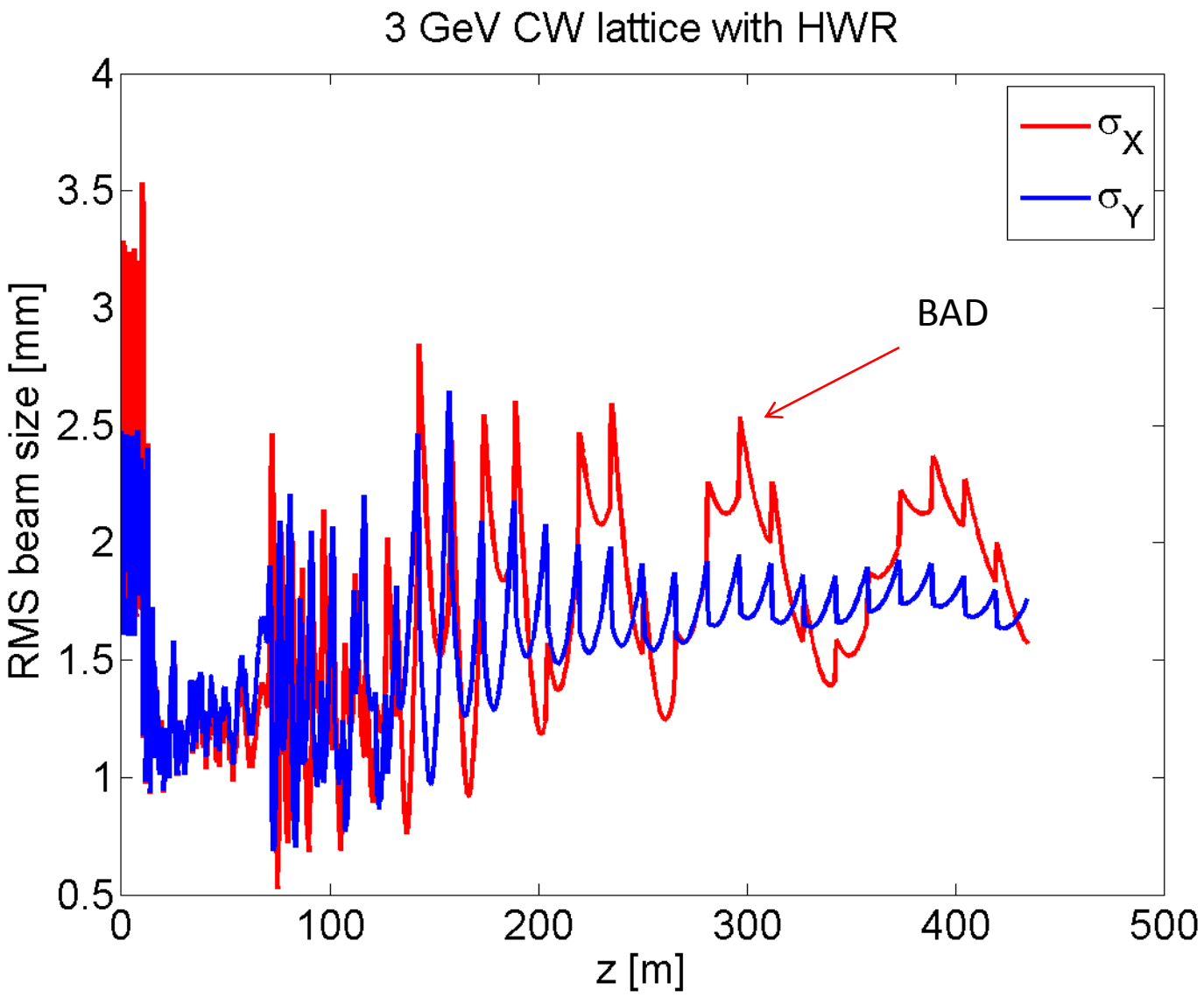

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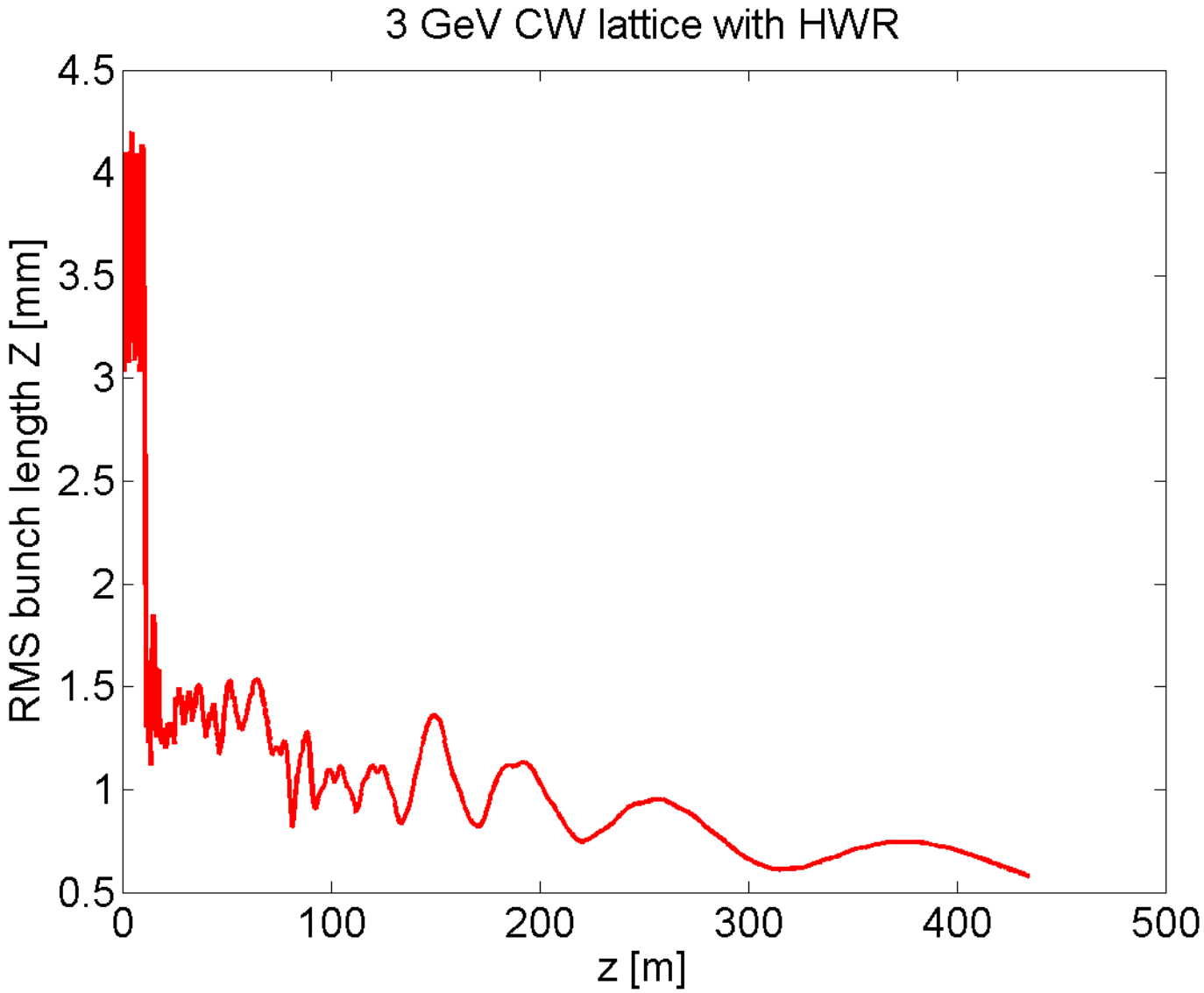

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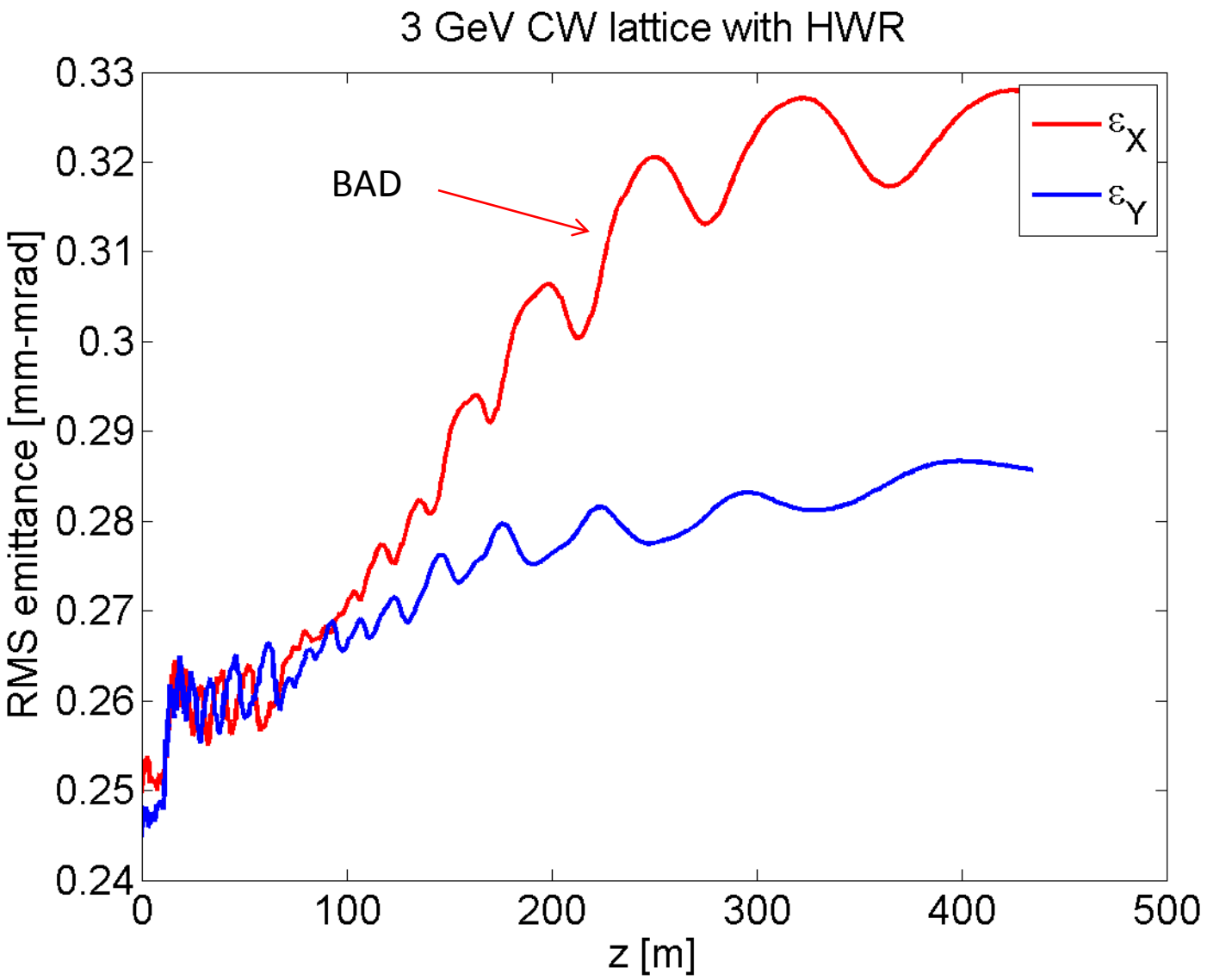

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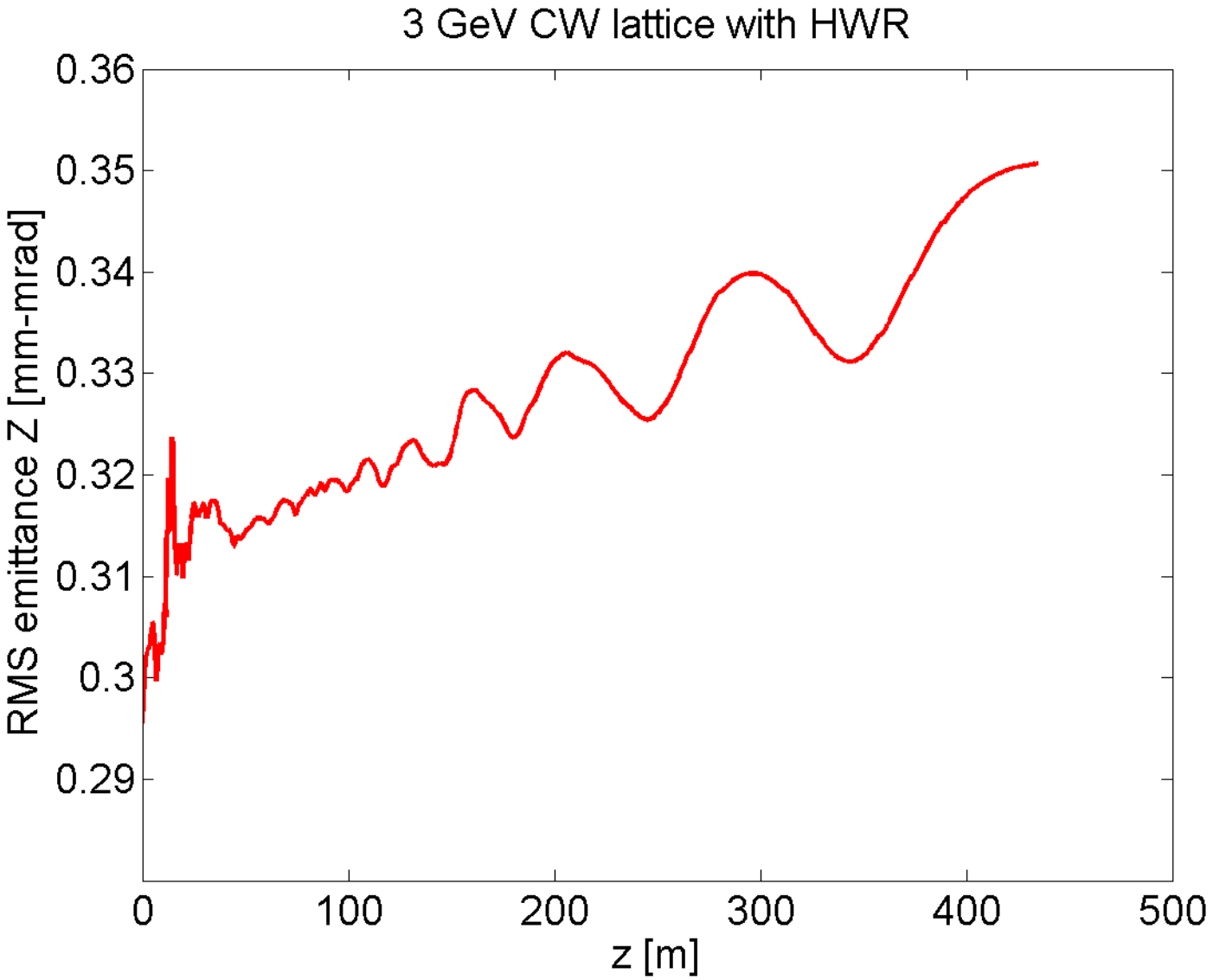

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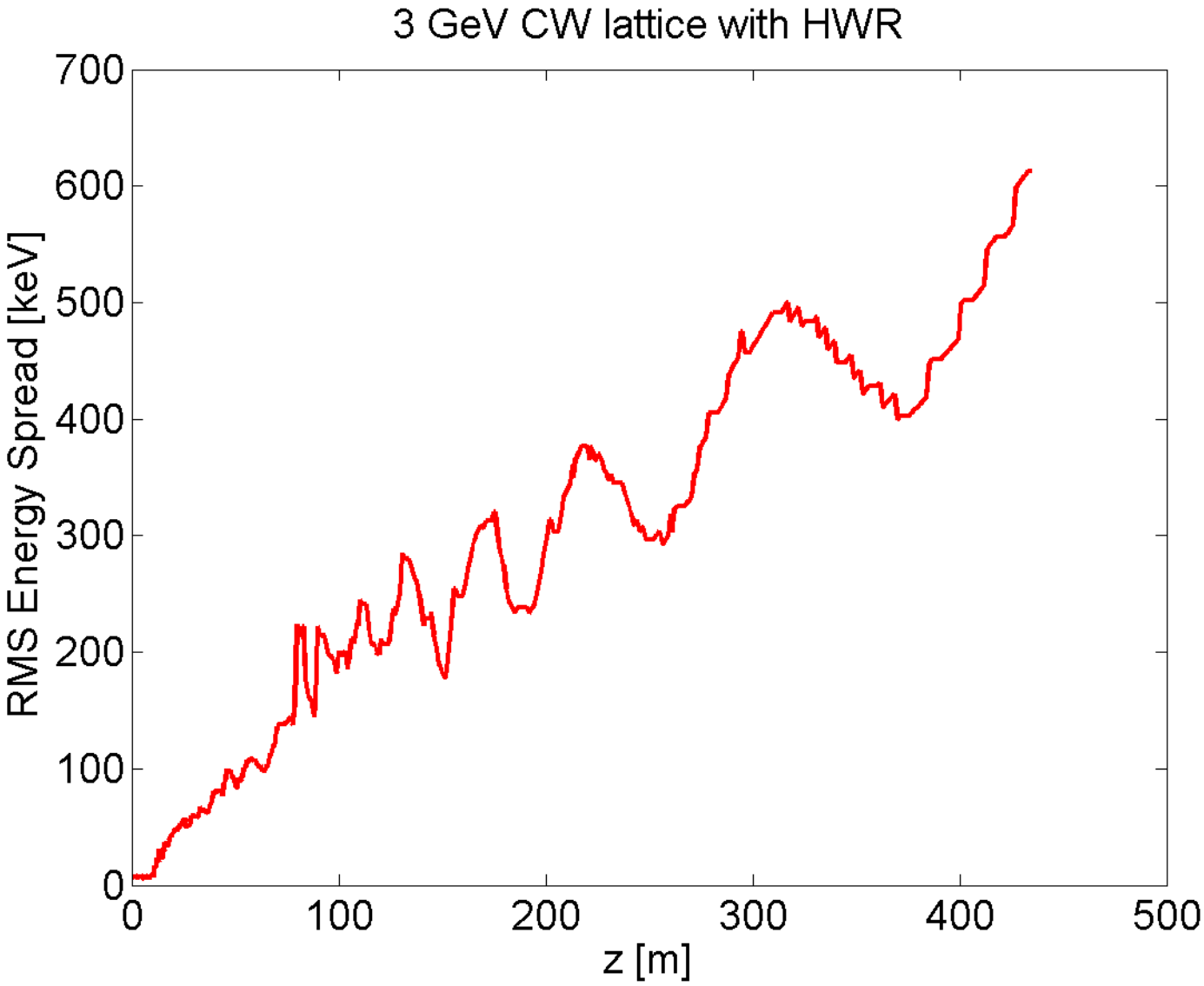

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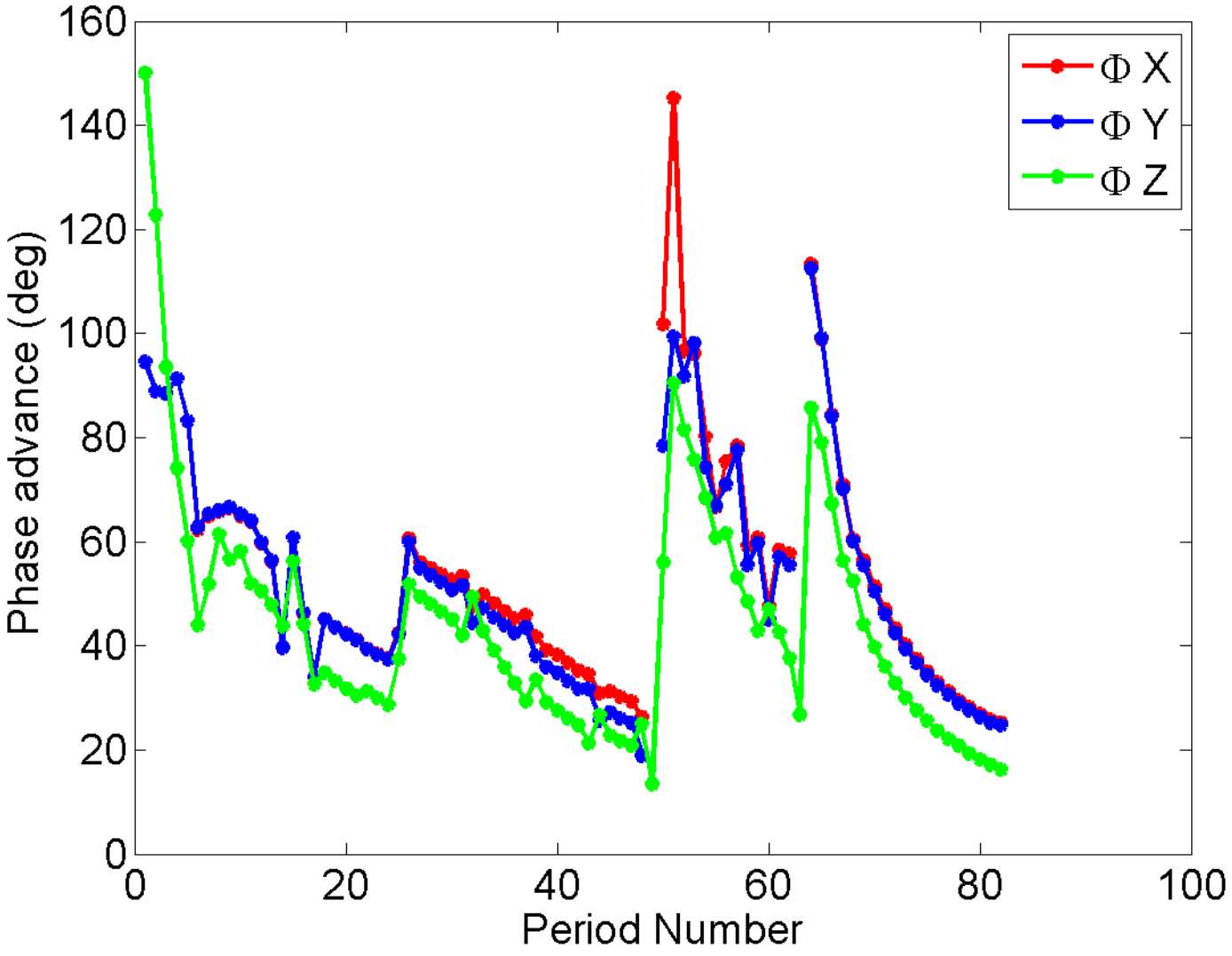

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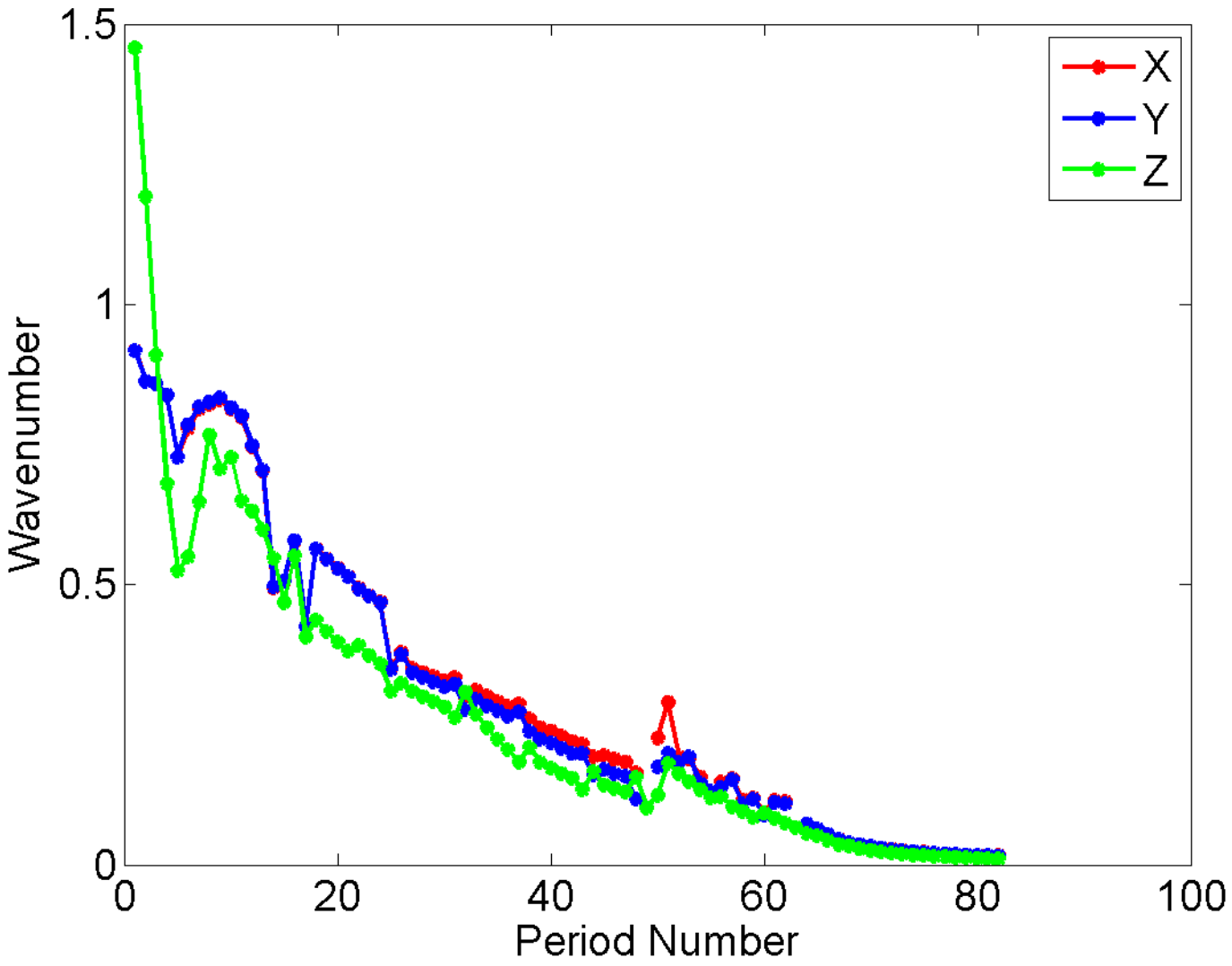
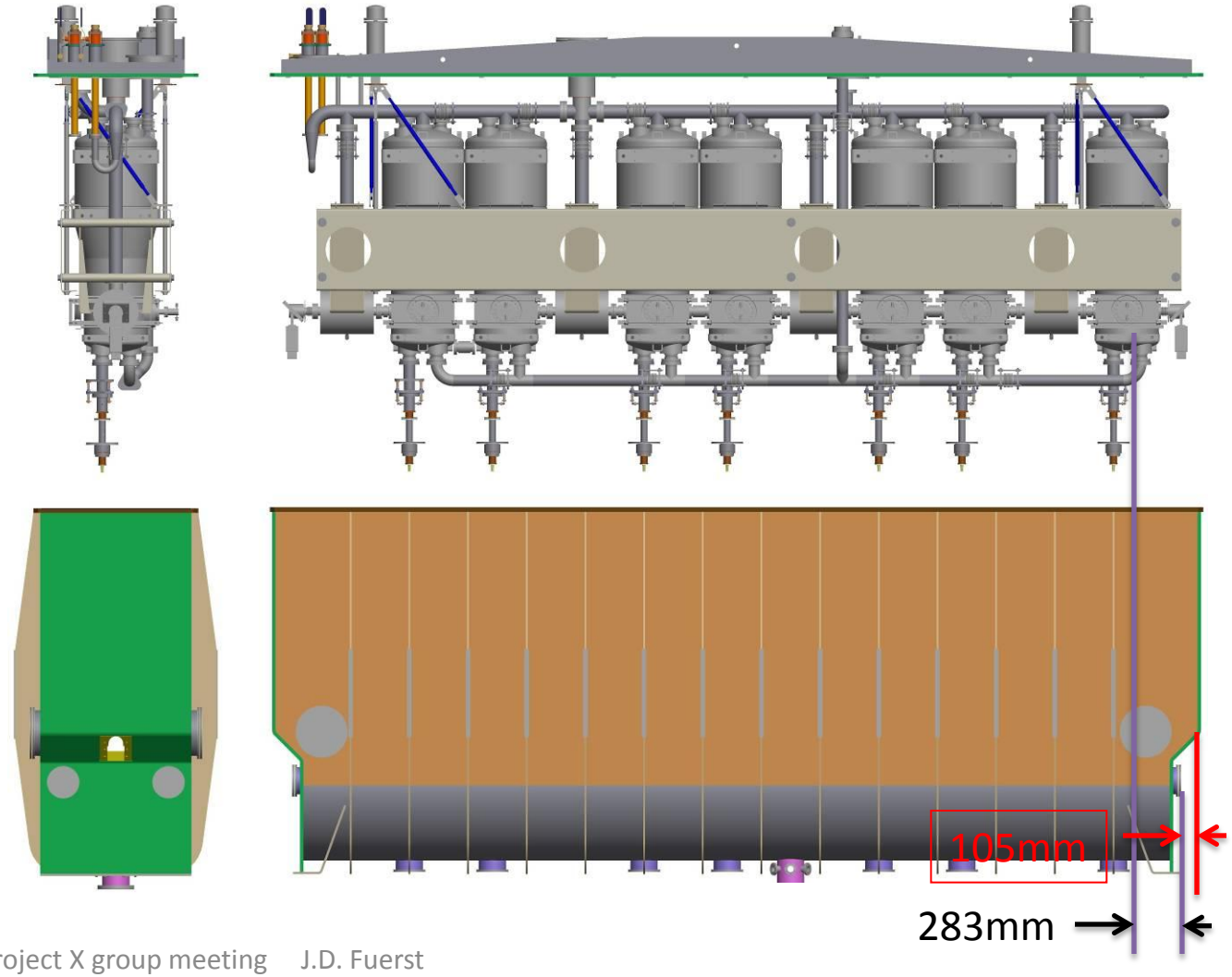


Actual space middle 9th HWR1 to middle 1st Sol SSR1 =79.5 cm

- 205” long
- 44.5” box width
- 36” lid width
- 80.5” box height
- (min. clearance: 84.5” X 48”)
- 103” OAL height
- String: ~3500lb
- lid+string: 5800lb
- Box/magshield/ thermal shield: ~6000lb



Some Other Studies we did with HWR1 *en lieu of* SSR1

- Turning off first HWR1 still OK (with 8 remaining HWR1)
- Turning off last HWR1 still OK. But space cannot be much > 79.5 cm
- 50 cm additional space possible between HWR1 and SSR1 cryomodule still OK (with 9 HWR1 working)
- 7 HWR still OK with 1S2C in SSR1 (at 5 mA…)